

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Dirk Van Den Boom, et. al      Art Unit : 1645  
Serial No. : 10/723,365      Examiner : Unknown  
Filed : November 26, 2003      Customer No: 20985  
Confirmation No. 4199  
Title : FRAGMENTATION-BASED METHODS AND SYSTEMS FOR SEQUENCE  
VARIATION DETECTION AND DISCOVERY

**Mail Stop Amendment**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

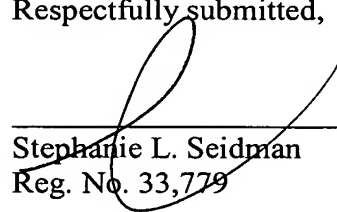
**TRANSMITTAL LETTER**

Dear Sir:

Transmitted herewith are an Information Disclosure Statement and Forms PTO-1449 (10 pages) and copies of non US patent cited references for filing in connection with the above-identified application. Because this Information Disclosure Statement is filed prior to receipt of a first office action on the merits in the above-referenced application, no fee is due. However, should it be determined that a fee for filing these papers is required, the Commissioner is authorized to charge Deposit Account No. 06-1050, as stated below:

- ☒ The Commissioner is hereby authorized to charge any fees that may be due in connection with this paper or with this application during its entire pendency to Deposit Account No. 06-1050. A duplicate of this sheet is enclosed.

Respectfully submitted,

  
\_\_\_\_\_  
Stephanie L. Seidman  
Reg. No. 33,779

**Dated: July 26, 2004**

Attorney Docket No. 17082-081001/24736-2073

**Address all correspondence to:**

Stephanie L. Seidman  
Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-5070  
Facsimile: (202) 626-7796  
email: seidman@fr.com



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Dirk Van Den Boom, et. al      Art Unit : 1645  
Serial No. : 10/723,365      Examiner : Unknown  
Filed : November 26, 2003      Confirmation No.:  
Customer No.: 20985  
Title : FRAGMENTATION-BASED METHODS AND SYSTEMS FOR SEQUENCE  
VARIATION DETECTION AND DISCOVERY

**Mail Stop: Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**  
**IN ACCORDANCE WITH 37 C.F.R. 1.97-1.98**

Dear Sir:

Because this Information Disclosure Statement is filed before the receipt of a First Office Action on the Merits for the above-captioned application a fee is not required. If no proper payment is enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1050.

In accordance with the duty of disclosure imposed by 37 C.F.R. §1.56 to inform the Patent Office of all references known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§1.97-1.98. Form PTO-1449 (10 pages) are provided herewith in connection with the above-captioned application. In accordance with 37 C.F.R. §1.98(d), copies of the references listed on the Form PTO-1449 are not provided herewith as they have been previously provided in connection with U.S. Serial Nos. 09/748,748, which are relied upon for an earlier filing date in accordance with 35 U.S.C. §120.

The documents cited on the Forms PTO-1449 are in the English language, with the exception of Item BY. Item BY (European Patent No. EP 0 269 520) is in the French language and was supplied with an English language equivalent US patent 5,079,342 (Item AA). Hence, in accordance with the requirements of 37 C.F.R. 1.98, as amended effective March 16, 1992, no further explanation of the listed items is necessary.

Applicant also makes known to the Examiner the following pending U.S. and International applications that have one or more common inventors and/or are commonly owned:

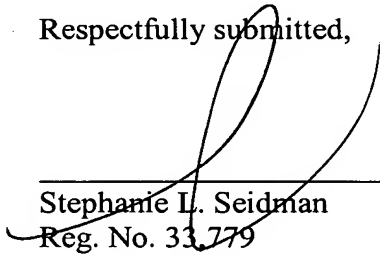
Application No.	Filing Date	Nick Name.
08/786,988	01/23/97	2001D
09/364,774	7/30/99	2001E
09/297,575	05/03/99	2001US
10/375,714	02/24/03	2002N
10/277,021	10/17/02	2003BRI
09/686,148	10/10/00	2004CUS
08/467,208	06/06/95	2011D
10/117,558	04/03/02	2013D
09/687,483	10/13/00	2033
10/273,321	10/15/02	2033B
10/272,756	10/15/02	2033C
10/273,228	10/15/02	2033D
10/272,665	10/15/02	2033E
09/834,700	04/12/01	2035
10/037,356	10/24/01	2046
10/403,902	03/27/03	2048B
10/128,680	04/22/02	2050B
10/202,189	07/22/02	2057D
09/541,210	04/03/00	2059B
09/139,386	08/25/98	2060
10/428,254	05/01/03	2065
10/830,943	04/22/04	2070
PCT/US04/12520	04/22/04	2070PC
10/723,365	11/26/03	2073
PCT/US03/37931	11/26/03	2073PC
PCT/US04/006740	03/06/04	2074PC
60/507,564	09/30/03	P2066
60/500,489	09/05/03	P2069
60/579,880	06/15/04	P2078

Application No.	Filing Date	Nick Name.
60/492,102	07/31/03	P2079
60/556,632	03/26/04	P2080

Although these documents are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the references, singly or in any combination thereof, is effective as prior art against the subject application. In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. 1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing references and they be made of record in the file history of the above-captioned application.

Respectfully submitted,



---

Stephanie L. Seidman  
Reg. No. 33,779

**Dated: July 26, 2004**  
Attorney Docket No. 17082-081001  
**Address all correspondence to:**  
Stephanie L. Seidman  
Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-5070  
Facsimile: (858) 678-5099  
10418321.doc

Substitute Form PTO-1449 (Modified)  <b>List of Patents and Publications for Applicant's Information Disclosure Statement</b>  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17082-081001 (24736-2073)	Application No. 10/723,365
	Applicant Dirk Van Den Boom, et. al		
	Filing Date November 26, 2003	Group Art Unit 1645	

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,079,342	01/07/92	Alizon et al.	530	324	02/11/87
	AB	5,118,937	06/02/92	Hillenkamp et al.	250	282	08/21/90
	AC	5,173,418	12/22/92	Molin et al.	435	198	02/07/90
	AD	5,252,478	10/12/93	Margarit Y Ros et al.	435	222	02/22/91
	AE	5,387,518	02/07/95	Sawayanagi et al.	435	221	04/24/92
	AF	5,391,490	02/21/95	Varshavsky et al.	435	224	01/25/94
	AG	5,427,927	06/27/95	Meyer et al.	435	69.7	01/01/91
	AH	5,536,649	06/16/96	Fraiser et al.	435	91.2	07/29/94
	AI	5,547,835	08/20/96	Köster	435	6	01/06/94
	AJ	5,605,798	02/25/97	Köster	435	6	03/17/95
	AK	5,622,824	04/22/97	Köster	435	6	02/10/95
	AL	5,646,020	07/08/97	Swiggen et al.	435	91.31	12/10/93
	AM	5,691,141	11/25/97	Köster	435	6	06/06/95
	AN	5,843,669	12/01/98	Kaiser et al.	435	6	11/29/96
	AO	5,869,242	02/09/99	Kamb	435	6	09/18/95
	AP	5,874,283	02/23/99	Harrington et al.	435	252.3	05/30/95
	AQ	5,888,795	03/30/99	Hamilton	435	200	09/09/97
	AR	5,952,176	09/14/99	McCarthy et al.	435	6	12/21/95
	AS	6,024,925	02/15/00	Little et al.	422	100	01/23/97
	AT	6,043,031	03/28/00	Köster et al.	435	6	03/18/96
	AU	6,090,606	07/18/600	Kaiser et al.	435	199	12/02/96
	AV	6,099,553	08/08/00	Hart et al.	606	232	05/21/98
	AW	6,190,865(B1)	02/20/01	Jendrisak et al.	435	6	09/27/95
	AX	6,194,144(B1)	02/27/01	Köster	435	6	03/18/96
	AY	6,194,180(B1)	02/27/01	Joyce	435	91.31	01/19/94
	AZ	6,225,450	05/01/00	Köster	536	22.1	06/07/95
	BA	6,235,478(B1)	05/22/01	Köster	435	6	04/06/99

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17082-081001 (24736-2073)	Application No. 10/723,365
<b>List of Patents and Publications for Applicant's Information Disclosure Statement</b>  (37 CFR §1.98(b))		Applicant Dirk Van Den Boom, et. al	
		Filing Date November 26, 2003	Group Art Unit 1645

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	BB	6,238,871(B1)	05/29/01	Köster	435	6	05/08/00
	BC	6,258,538(B1)	07/10/01	Köster <i>et al.</i>	435	6	04/06/99
	BD	6,265,167	07/24/01	Carmichael <i>et al.</i>	435	6	05/18/99
	BE	6,326,174	12/04/01	Joyce <i>et al.</i>	435	91.31	12/01/95
	BF	6,331,427(B1)	12/18/01	Robison	435	226	03/26/99
	BG	6,383,775	05/07/02	Duff <i>et al.</i>	435	69.1	03/11/99
	BH	6,440,705	08/27/02	Stanton, Jr. <i>et al.</i>	435	91.2	09/10/99

### Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	BI	92/13969	08/20/92	PCT (A1)				
	BJ	94/00562	01/06/94	PCT (A1)				
	BK	94/21663	09/29/94	PCT (A1)				
	BL	96/29431	09/26/96	PCT (A2, A3)				
	BM	97/03210	01/30/97	PCT (A1)				
	BN	97/33000	09/12/97	PCT (A1)				
	BO	97/37041	10/09/97	PCT (A2, A3)				
	BP	98/12355	03/26/98	PCT (A1)				
	BQ	98/20020	05/14/98	PCT (A2, A3)				
	BR	98/20166	05/14/98	PCT (A2, A3)				
	BS	98/54571	12/03/98	PCT (A1)				
	BT	99/54501	10/28/99	PCT (A1)				
	BU	99/54751	12/03/98	PCT (A1)				
	BV	99/57318	11/11/99	PCT (A2, A3)				
	BW	00/18967	04/06/00	PCT (A1)				
	BX	00/60361	10/12/00	PCT (A2, A3)				
	BY	0 269 520	01/06/88	EP (A2)				

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al.			
				Filing Date November 26, 2003		Group Art Unit 1645	
<b>Foreign Patent Documents or Published Foreign Patent Applications</b>							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes No
	BZ	0 655 501	05/31/95	EP (A1)			

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	CA ✓	Anderson, S., "Shotgun DNA sequencing using cloned DNase I-generated fragments" <i>Nucleic Acids Res.</i> , <u>9</u> (13): 3015-3027 (1981)
	CB ✓	Anker, R. <i>et al.</i> , "Tetranucleotide repeat polymorphism at the human thyroid peroxidase (hTPO) locus", <i>Hum. Mol. Genet.</i> , <u>1</u> (2): 137 (1992)
	CC /	Banerjee, A. <i>et al.</i> , "inhA, a gene encoding a target for isoniazid and ethionamide in Mycobacterium tuberculosis", <i>Science</i> , <u>263</u> (5144): 227-230 (1994)
	CD ✓	Barlow, D.P. and H. Lehrach, "Genetics by gel electrophoresis: the impact of pulsed field gel electrophoresis on mammalian genetics", <i>Trends Genet.</i> , <u>3</u> : 167-171 (1987)
	CE ✓	Beckmann, J.S. and J.L. Weber, "Survey of human and rat microsatellites", <i>Genomics</i> , <u>12</u> : 627-631 (1992)
	CF ✓	Berkenkamp, S. <i>et al.</i> , "Ice as a Matrix for IR-Matrix-Assisted Laser Desorption/Ionization: Mass Spectra from a Protein Single Crystal", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , <u>93</u> (14): 7003-7007 (1996)
	CG ✓	Bessho, T., "Nucleotide excision repair 3' endonuclease XPG stimulates the activity of base excision repair enzyme thymine glycol DNA glycosylase", <i>Nucleic Acids Res.</i> , <u>27</u> (4): 979-983 (1999)
	CH ✓	Biemann, K., "Sequencing of Peptides by Tandem Mass Spectrometry and High-Energy Collision-Induced Dissociation", <i>Methods in Enzymol.</i> , <u>193</u> : 455-479 (1990)
	CI ✓	Bird, A., "DNA methylation patterns and epigenetic memory", <i>Genes and Development</i> , <u>16</u> (1): 6-21 (2002)
	CJ ✓	Bjelland, S. and E. Seeberg, "Purification and characterization of 3-methyladenine DNA glycosylase I from <i>Escherichia coli</i> ", <i>Nucleic Acids Res.</i> , <u>15</u> (7): 2787-2801 (1987)
	CK ✓	Bocker, S., "SNP and mutation discovery using base-specific cleavage and MALDI-TOF mass spectrometry", <i>Bioinformatics</i> , <u>19</u> : i44-i53 (2003)
	CL ✓	Boguski, M.S. <i>et al.</i> , "Identification of a Cytidine-specific Ribonuclease from Chicken Liver", <i>J. Biol. Chem.</i> , <u>255</u> (5): 2160-2163 (1980)
	CM ✓	Braun, A. <i>et al.</i> , "Improved Analysis of Microsatellites Using Mass Spectrometry", <i>Genomics</i> , <u>46</u> (1):18-23 (1997)
Examiner Signature		Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al			
				Filing Date November 26, 2003		Group Art Unit 1645	
Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
	CN	Browne, K. A., "Metal ion-catalyzed nucleic Acid alkylation and fragmentation", <i>J. Am. Chem. Soc.</i> , <u>124(27)</u> : 7950-7962 (2002)					
	CO	Cannistraro, V.J. and D. Kennell, "Purification and characterization of ribonuclease M and Mrna degradation in <i>Escherichia coli</i> ", <i>Eur. J. Biochem.</i> , <u>181(2)</u> : 363-370 (1989)					
	CP	Caskey, C. T. <i>et al.</i> , "Triplet Repeat Mutations in Human Disease", <i>Science</i> <u>256(5058)</u> : 784-789 (1992)					
	CQ	Chait, B.T. and S.B.H. Kent, "Weighing Naked Proteins: Practical, High-Accuracy Mass Measurement of Peptides and Proteins", <i>Science</i> , <u>257(5078)</u> : 1885-1894 (1992)					
	CR	Chakrabarti, L. <i>et al.</i> , "Sequence of simian immunodeficiency virus from macaque and its relationship to other human and simian retroviruses", <i>Nature</i> , <u>328(6130)</u> : 543-547 (1987)					
	CS	Chung, M.H. <i>et al.</i> , "An endonuclease activity of <i>Escherichia Coli</i> that specifically removes 8-hydroxyguanine residues from DNA", <i>Mutat. Res.</i> , <u>254(1)</u> : 1-12, (1991)					
	CT	Cleveland, D.W. <i>et al.</i> , "Peptide Mapping by Limited Proteolysis in Sodium Dodecyl Sulfate and Analysis by Gel Electrophoresis", <i>J. Biol. Chem.</i> , <u>252(3)</u> : 1102-1106 (1977)					
	CU	Dausset, J. <i>et al.</i> , "Centre d'Etude du Polymorphisme Humain (CEPH): Collaborative Genetic Mapping of the Human Genome", <i>Genomics</i> , <u>6(3)</u> : 575-577 (1990)					
	CV	Donis-Keller, H. <i>et al.</i> , : Mapping adenines, guanines, and pyrimidines in RNA", <i>Nucleic Acids Res.</i> , <u>4(8)</u> : 2527-2537 (1977)					
	CW	Donis-Keller, H., "Phy M.: an RNase activity specific for U and A residues useful in RNA sequence analysis", <i>Nucleic Acids Res.</i> , <u>8(14)</u> : 3133-3142 (1980)					
	CX	Dunham, I. <i>et al.</i> , "The DNA sequence of human chromosome 22", <i>Nature</i> , <u>402(6761)</u> : 489-495 (1999)					
	CY	Edwards, M.C. <i>et al.</i> , "Pentanucleotide repeat length polymorphism at the human CD4 locus", <i>Nucleic Acids Res.</i> , <u>19(17)</u> : 4791 (1991)					
	CZ	Eftedal, I. <i>et al.</i> , "Consensus sequences for good and poor removal of uracil from double stranded DNA by uracil-DNA glycosylase", <i>Nucleic Acids Res.</i> , <u>21(9)</u> : 2095- 2101 (1993)					
	DA	Ehrlich, S.D. <i>et al.</i> , "Studies on acid deoxyribonuclease. IX. 5'-hydroxy-terminal and penultimate nucleotides of oligonucleotides obtained from calf thymus deoxyribonucleic acid", <i>Biochemistry</i> , <u>10(11)</u> : 2000-2009 (1971)					

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al			
				Filing Date November 26, 2003		Group Art Unit 1645	
Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
	DB	German, J. and E. Passarge, "Bloom's Syndrome. XII. Report from the Registry for 1987", <i>Clin. Genet.</i> , <u>35</u> : 57-69 (1989)					
	DC	Germينو, J. and D. Bastis, "Rapid purification of a cloned gene product by genetic fusion and site-specific proteolysis", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , <u>81</u> (15):4692- (1984)					
	DD	Gogos, J.A. <i>et al.</i> , "Detection of single base mismatches of thymine and cytosine residues by potassium permanganate and hydroxylamine in the presence of tetralkylammonium salts.", <i>Nucleic Acids Res.</i> , <u>18</u> (23): 6807-6817 (1990)					
	DE	Gupta, R.C. and K. Randerath, "Use of specific endonuclease cleavage in RNA sequencing", <i>Nucleic Acids Res.</i> , <u>4</u> (6):1957-1978 (1977)					
	DF	Gust, I.D. <i>et al.</i> , "Taxonomic classification of Hepatitis A virus", <i>Intervirology</i> , <u>20</u> : 1-7 (1983)					
	DG	Gut, I. G. and S. Beck, "A procedure for selective DNA alkylation and detection by mass spectrometry", <i>Nucleic Acids Res.</i> , <u>23</u> (8): 1367-1373 (1995)					
	DH	Guyader, M. <i>et al.</i> , "Genome organization and transactivation of the human immunodeficiency virus type 2", <i>Nature</i> , <u>326</u> (6114): 662-669 (1987)					
	DI	Haff, L. and I.P. Smirnov, "Single-Nucleotide Polymorphism Identification Assays Using a Thermostable DNA Polymerase and Delayed Extraction MALDI-TOF Mass Spectrometry", <i>Genome Res.</i> , <u>7</u> : 378-388, (1997)					
	DJ	Haffey, M. L. <i>et al.</i> , "Site-specific cleavage of a fusion protein by renin", <i>DNA</i> , <u>6</u> (6): 565-571 (1987)					
	DK	Hahner, S. <i>et al.</i> , "Matrix-assisted laser desorption/ionization mass spectrometry (MALDI) of endonuclease digests of RNA", <i>Nucleic Acids Res.</i> , <u>25</u> (10): 1957-1964 (1997)					
	DL	Hanish, J. and M. McClelland, "Activity of DNA modification and restriction enzymes in KGB, a potassium glutamate buffer Gene", <i>Gene. Anal. Tech.</i> , <u>5</u> : 105-107 (1988)					
	DM	Harrington, J.J. and M.R. Lieber, "Functional domains within FEN-1 and RAD2 define a family of structure- specific endonucleases: implications for nucleotide excision repair", <i>Genes and Develop.</i> , <u>8</u> (11): 1344-1355 (1994)					
	DN	Hartmer, R. <i>et al.</i> , "RNase T1 mediated base-specific cleavage and MALDI-TOF for high-throughput comparative sequence analysis", <i>Nucleic Acids Res.</i> , <u>31</u> (9): e47 pages 1-10 (2003)					
	DO	Heym, B. <i>et al.</i> , "Implications of multidrug resistance for the future of short-course chemotherapy of tuberculosis: a molecular study", <i>Lancet</i> , <u>344</u> (8918): 293-298 (1994)					
Examiner Signature				Date Considered			
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al			
				Filing Date November 26, 2003		Group Art Unit 1645	
Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
	DP	Hillenkamp, F. and M. Karas, "Matrix-assisted laser desorption/ionization mass spectrometry of biopolymers", <i>Anal. Chem.</i> , <u>63</u> (24): 1193A-1202A (1991)					
	DQ	Hsu, I-C. <i>et al.</i> , "Detection of DNA point mutations with DNA mismatch repair enzymes", <i>Carcinogenesis</i> , <u>15</u> (8): 1657-1662 (1994)					
	DR	Huang, Z.-H. <i>et al.</i> , "Protein Sequencing by Matrix-Assisted Laser Desorption Ionization—Postsource Decay—Mass Spectrometry Analysis of the <i>N</i> -Tris(2,4,6-trimethoxyphenyl)phosphine-Acetylated Tryptic Digests", <i>Anal. Biochem.</i> , <u>268</u> (2): 305-317 (1999)					
	DS	Jahnen <i>et al.</i> , "Internal amino acid sequencing of proteins by in situ cyanogen bromide cleavage in polyacrylamide gels", <i>Biochem. Biophys. Res. Commun.</i> , <u>166</u> (1): 139-145 (1990)					
	DT	Jeffreys <i>et al.</i> , "Hypervariable 'minisatellite' regions in human DNA", <i>Nature</i> , <u>314</u> : 67-73 (1985)					
	DU	Johnson, R. S. <i>et al.</i> , "Collision-induced fragmentation of (M + H) <sup>+</sup> ions of peptides. Side chain specific sequence ions", <i>Intl. J. Mass Spectrom. Ion Processes</i> , <u>86</u> : 137-154 (1988)					
	DV	Jurinke, C. <i>et al.</i> , "The use of MassARRAY technology for high throughput genotyping" <i>Adv. Biochem. Eng. Biotechnol.</i> , <u>77</u> : 57-74 (2002)					
	DW	Jurinke, C. <i>et al.</i> , "Automated genotyping using the DNA MassArray technology", <i>Methods Mol. Biol.</i> , <u>187</u> : 179-192 (2002)					
	DX	Köster, H. <i>et al.</i> , "A strategy for rapid and efficient DNA sequencing by mass spectrometry", <i>Nat. Biotechnol.</i> , <u>14</u> (9): 1123-1128 (1996)					
	DY	Kruglyak, L. and D.A. Nickerson, "Variation is the spice of life", <i>Nat. Genet.</i> , <u>27</u> (3): 234-236 (2001)					
	DZ	Kuchino, Y. and S. Nishimura, "Enzymatic RNA Sequencing", <i>Methods Enzymol.</i> , <u>180</u> : 154-163 (1989)					
	EA	Kwok <i>et al.</i> , "Effects of primer-template mismatches on the polymerase chain reaction: human immunodeficiency virus type 1 model studies", <i>Nucl. Acids Res.</i> , <u>18</u> (4): 999-1005 (1990)					
	EB	Lai, E. <i>et al.</i> , "A 4-Mb High-Density Single Nucleotide Polymorphism-Based Map around Human APOE", <i>Genomics</i> , <u>54</u> (1): 31-38 (1998)					
	EC	Litt, M. and J.A. Luty, "Dinucleotide repeat polymorphism at the D6S89 locus", <i>Nucleic Acids Res.</i> , <u>18</u> (14): 4301 (1990)					
	ED	Litt, M. <i>et al.</i> , "Dinucleotide repeat polymorphism at the D11S35 locus", <i>Nucleic Acids Res.</i> , <u>18</u> (19): 5921 (1990)					

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al			
				Filing Date November 26, 2003		Group Art Unit 1645	
<b>Other Documents (include Author, Title, Date, and Place of Publication)</b>							
Examiner Initial	Desig. ID	Document					
	EE	Little, D. P. <i>et al.</i> , "Mass spectrometry from miniaturized arrays for full comparative DNA analysis", <i>Nat. Med.</i> , <u>3</u> (12): 1413-1416 (1997)					
	EF	Lu, A.-L. and I.-C. Hsu, "Detection of Single DNA Base Mutations with Mismatch Repair Enzymes", <i>Genomics</i> , <u>14</u> (1): 249-255 (1992)					
	EG	Luty, J.A. <i>et al.</i> , "Five Polymorphic Microsatellite VNTRs on the Human X Chromosome", <i>Am. J. Hum. Genet.</i> , <u>46</u> : 776-783 (1990)					
	EH	Luty, J.A. and M. Litt, "Dinucleotide repeat polymorphism at the D14S45 locus", <i>Nucleic Acids Res.</i> , <u>19</u> (15): 4308 (1991)					
	EI	Marotta, C.A. <i>et al.</i> , "Preferred sites of digestion of a ribonuclease from <i>Enterobacter</i> species in the sequence analysis of <i>Bacillus stearothermophilus</i> 5S ribonucleic acid", <i>Biochemistry</i> , <u>12</u> (15): 2901-2904 (1973)					
	EJ	Maxam, A.M. and W. Gilbert, "A new method for sequencing DNA", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , <u>74</u> (2): 560-564 (1977)					
	EK	McClelland, M. <i>et al.</i> , "A single buffer for all restriction endonucleases", <i>Nucleic Acid Res.</i> , <u>16</u> (1): 364 (1988)					
	EL	McKinnon, P.J., "Ataxia-telangiectasia: an inherited disorder of ionizing-radiation sensitivity in man. Progress in the elucidation of the underlying biochemical defect", <i>Hum. Genet.</i> , <u>75</u> (3): 197-208 (1987)					
	EM	McLafferty, F.W., "High-resolution tandem FT mass spectrometry above 10 kDa", <i>Acc. Ch. em. Res.</i> , <u>27</u> (11): 379-386 (1994)					
	EN	Morris <i>et al.</i> , "Molecular Mechanisms of Multiple Drug Resistance in Clinical Isolates of <i>Mycobacterium tuberculosis</i> ", <i>J. Infect. Dis.</i> , <u>171</u> : 954-960 (1995)					
	EO	Murante, R. S. <i>et al.</i> , "The Calf 5'-to 3'-Exonuclease Is Also an Endonuclease with Both Activities Dependent on Primers Annealed Upstream of the Point of Cleavage", <i>J. Biol. Chem.</i> , <u>269</u> (2): 1191-1196 (1994)					
	EP	Nagai, K. and H. C.Thogersen, "Generation of <i>beta</i> -globin by sequence-specific proteolysis of a hybrid protein produced in <i>Escherichia coli</i> ", <i>Nature</i> , <u>309</u> : 810-812 (1984)					
	EQ	Nakamura, Y. <i>et al.</i> , "Variable Number of Tandem Repeat (VNTR) Markers for Human Gene Mapping", <i>Science</i> , <u>235</u> : 1616-1622 (1987)					
	ER	Nikodem, V. and J.R. Fresco, "Protein Fingerprinting by SDS-Gel Electrophoresis after Partial Fragmentation with CNBr", <i>Anal. Biochem.</i> , <u>97</u> (2): 382-386 (1979)					
	ES	Nishimura, D.Y. and J.C. Murray, "A tetranucleotide repeat for the F13B locus", <i>Nucleic Acids Res.</i> , <u>20</u> (5): 1167 (1992)					

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al			
				Filing Date November 26, 2003		Group Art Unit 1645	
Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
	ET	Nordhoff, E. <i>et al.</i> , "Ion stability of nucleic acids in infrared matrix-assisted laser desorption/ionization mass spectrometry", <i>Nucleic Acids Res.</i> , <u>21(15)</u> : 3347-3357 (1993)					
	EU	Perlman, P.S. and R.A. Butow, "Mobile Introns and Intron-Encoded Proteins", <i>Science</i> , <u>246(4934)</u> : 1106-1109 (1989)					
	EV	Ploos <i>et al.</i> , "Tetranucleotide repeat polymorphism in the vWF gene", <i>Nucleic Acids Res.</i> , <u>18(16)</u> : 4957 (1990)					
	EW	Polymeropoulos, M.H. <i>et al.</i> , "Nucl. Acids Res.", <u>18(24)</u> : 7468 (1990)					
	EX	Polymeropoulos <i>et al.</i> , "Tetranucleotide repeat polymorphism at the human aromatase cytochrome P-450 gene (CYP19)", <i>Nucl. Acids Res.</i> , <u>19(1)</u> : 195 (1991)					
	EY	Polymeropoulos, M.H. <i>et al.</i> , "Tetranucleotide repeat polymorphism at the human c-fes/fps proto-oncogene (FES)", <i>Nucleic Acids Res.</i> , <u>19(14)</u> : 4018 (1991)					
	EZ	Polymeropoulos, M.H. <i>et al.</i> , <i>Nucl. Acids Res.</i> , <u>19(15)</u> : 4306 (1991)					
	FA	Ratner, L. <i>et al.</i> , "Complete nucleotide sequence of the AIDS virus, HTLV-III", <i>Nature</i> , <u>313</u> : 227-284 (1985)					
	FB	Reymer, P.W.A. <i>et al.</i> , "A lipoprotein lipase mutation (Asn291Ser) is associated with reduced HDL cholesterol levels in premature atherosclerosis", <i>Nature Gen.</i> , <u>10</u> : 28-34 (1995)					
	FC	Rodi, C.P. <i>et al.</i> , "A strategy for the rapid discovery of disease markers using the MassARRAY system", <i>BioTechniques</i> , <u>32</u> : S62-S69 (2002)					
	FD	Rojo, M.A. <i>et al.</i> , "Cusativin, a new cytidine-specific ribonuclease accumulated in seeds of <i>Cucumis sativus</i> L"; <i>Planta</i> , <u>194</u> : 328-338 (1994)					
	FE	Ross, P. <i>et al.</i> , "High level multiplex genotyping by MALDI-TOF mass spectrometry", <i>Nat. Biotechnol.</i> , <u>16(13)</u> : 1347-1351 (1998)					
	FF	Santoro, S. W. and G. F. Joyce, "A general purpose RNA-cleaving DNA enzyme", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , <u>94(9)</u> : 4262-4266 (1997)					
	FG	Saparbaev, M. <i>et al.</i> , "Escherichia coli, Saccharomyces cerevisiae, rat and human 3-methyladenine DNA glycosylases repair 1,N6-ethenoadenine when present in DNA", <i>Nucleic Acids Res.</i> , <u>23(18)</u> : 3750-3755 (1995)					
	FH	Sargent, T.D. <i>et al.</i> , "Isolation of Differentially Expressed Genes", <i>Methods Enzymol.</i> , <u>152</u> : 423-432 (1987)					
	FI	Saris, C.J.M. <i>et al.</i> , "Hydroxylamine Cleavage of Proteins in Polyacrylamide Gels", <i>Anal. Biochem.</i> , <u>132(1)</u> : 54-67 (1983)					
	FJ	Schachter, F. <i>et al.</i> , "Genetic associations with human longevity at the APOE and ACE loci", <i>Nat. Gen.</i> , <u>6</u> : 29-32 (1994)					
Examiner Signature				Date Considered			
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)	Application No. 10/723,365
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al	
				Filing Date November 26, 2003	Group Art Unit 1645
Other Documents (include Author, Title, Date, and Place of Publication)					
Examiner Initial	Desig. ID	Document			
	FK	Seela, F. and A. Kehne, "Palindromic octa- and dodecanucleotides containing 2'-deoxytubercidin: synthesis, hairpin formation, and recognition by the endodeoxyribonuclease EcoRI", <i>Biochemistry</i> , 26(8): 2232-2238 (1987)			
	FL	Sequenom, Application Notes from company website: "SNP Discovery Using theMassARRAY System", <a href="http://www.sequenom.com/Assets/pdfs/appnotes/SNP_Discovery_Application_Note.pdf">http://www.sequenom.com/Assets/pdfs/appnotes/SNP_Discovery_Application_Note.pdf</a> (accessed on 6/29/04)			
	FM	Shchepinov <i>et al.</i> , "Matrix-induced fragmentation of P3'-N5'-phosphoroamidate-containing DNA: high-throughput MALDI-TOF analysis of genomic sequence polymorphisms", <i>Nucleic Acids Res.</i> , 29(18): 3864-3872 (2001)			
	FN	Simoncsits <i>et al.</i> , "New rapid gel sequencing method for RNA", <i>Nature</i> , 269: 833-836 (1977)			
	FO	Siuzdak, G., "The emergence of mass spectrometry in biochemical research", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 91(24): 11290-11297 (1994)			
	FP	Smith, D. B. and K. S. Johnson, "Single-step purification of polypeptides expressed in <i>Escherichia coli</i> as fusions with glutathione S-transferase", <i>Gene</i> , 67: 31-40 (1988)			
	FQ	Springer, B. <i>et al.</i> , "Two-laboratory collaborative study on identification of mycobacteria: molecular versus phenotypic methods", <i>J. Clin. Microbiol.</i> , 34(2): 296-303 (1996)			
	FR	Stevens, A., "Pyrimidine-specific cleavage by an endoribonuclease of <i>Saccharomyces cerevisiae</i> ", <i>J. Bacteriol.</i> , 164(1): 57-62 (1985)			
	FS	Stults, J. T. <i>et al.</i> , "Simplification of high-energy collision spectra of peptides by amino-terminal derivatization", <i>Anal. Chem.</i> , 65(13): 1703-1708 (1993)			
	FT	The International SNP Map Working Group, "A Map of human genome sequence variation containing 1.42 million single nucleotide polymorphisms", <i>Nature</i> , 409(6822): 928-933 (2001)			
	FU	Tang, K. <i>et al.</i> , "Chip-based genotyping by mass spectrometry", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 96(18): 10016-10020 (1999)			
	FV	Tautz, D., "Hypervariability of simple sequences as a general source for polymorphic DNA markers..", <i>Nucleic Acids Res.</i> , 17(16): 6463-6471 (1989)			
	FW	Vanfleteren, J.R. <i>et al.</i> , "Peptide Mapping and Microsequencing of Proteins Separated by SDS-PAGE After Limited <i>In Situ</i> Acid Hydrolysis", <i>BioTechniques</i> , 12(4): 550-557 (1992)			

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 17082-081001 (24736-2073)		Application No. 10/723,365	
List of Patents and Publications for Applicant's Information Disclosure Statement  (37 CFR §1.98(b))				Applicant Dirk Van Den Boom, et. al			
				Filing Date November 26, 2003		Group Art Unit 1645	
Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
	FX /	Vath, J. E. <i>et al.</i> , "Method for the derivatization of organic compounds at the sub-nanomole level with reagent vapor", <i>Fresenius' Zeitschrift für analytische Chemie</i> , 331: 248-252 (1988)					
	FY /	von Wintzingerode, F. <i>et al.</i> , "Base-specific fragmentation of amplified 16S rRNA genes analyzed by mass spectrometry: A tool for rapid bacterial identification", <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 99(10): 7039-7044 (2002)					
	FZ /	von Wintzingerode, F. <i>et al.</i> , "Phylogenetic Analysis of an Anaerobic, Trichlorobenzene-Transforming Microbial Consortium", <i>Appl. Environ. Microbiol.</i> , 65(1): 283-286 (1999)					
	GA /	Wagner, D. S. <i>et al.</i> , "Derivatization of Peptides to Enhance Ionization Efficiency and Control Fragmentation During Analysis by Fast Atom Bombardment Tandem Mass Spectrometry", <i>Biol. Mass Spectrom.</i> , 20(7): 419-425 (1991)					
	GB /	Wain-Hobson, S. <i>et al.</i> , "Nucleotide sequence of the AIDS virus, LAV", <i>Cell</i> , 40: 9-17 (1985)					
	GC /	Wang, D.G. <i>et al.</i> , "Large-scale identification, mapping, and genotyping of single-nucleotide polymorphisms in the human genome", <i>Science</i> , 280: 1077-1082 (1998)					
	GD /	Weber, J.L and P.E. May, "Abundant class of human DNA polymorphisms which can be typed using the polymerase chain reaction", <i>Am. J. Hum. Genet.</i> , 44: 388-396 (1989)					
	GE /	Weissenbach, J. <i>et al.</i> , "A second-generation linkage map of the human genome", <i>Nature</i> , 359(6398): 794-801 (1992)					
	GF /	Yule, A., "Amplification-Based Diagnosis Target TB", <i>Bio/Technology</i> , 12: 1335-1337 (1994)					
	GG /	Zaia, J. and K. Biemann, "Comparison of Charged Derivatives for High Energy Collision-Induced Dissociation Tandem Mass Spectrometry", <i>J. Am. Soc. Mass Spectrom.</i> , 6(5): 428-436 (1995)					
	GH /	Zaia, J., in: <i>Protein and Peptide Analysis by Mass Spectrometry</i> , J. R. Chapman (ed.), pp. 29-41, Humana Press, Totowa, N.J., (1996)					
	GI	Zuliani, G. and H.H. Hobbs, "Tetranucleotide repeat polymorphism in the LPL gene", <i>Nucleic Acids Res.</i> , 18(16): 4958 (1990)					

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	